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10/716,462	11/20/2003	Jean-Pierre Mao	245495US41XCONT	6869
22850	7590	10/03/2007		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER CHU, WUTCHUNG	
			ART UNIT	PAPER NUMBER
			2616	
			NOTIFICATION DATE	DELIVERY MODE
			10/03/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/716,462

Applicant(s)

MAO, JEAN-PIERRE

Examiner

Wutchung Chu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This communication is in response to application's amendment filed on 7/25/2007. Claims 1-20 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-7 and 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Robins et al. (US6430184B1).

Regarding claim 1, Robins et al. discloses a process and device for communicating data packet flows, including ATM (**see column 1 line 27**) comprising the steps of:

- starting a packeting operation of asynchronous data (**see column 8 line 16**);
- receiving a message from a message composition module (**see column 8 line 32**);
- interrupting the packeting operation based on the message (**see column 7 line 8-13 where RE examines canonicalized packet headers**)

received at interface from the QM and to determine rapidly whether the packet belongs to a known flow and to provide instructions accordingly on interface for appropriate scheduling corresponds to interrupting packeting operation based on the message);

- **transmitting a packet of asynchronous data formed during the packeting operation prior to the interrupting step (see column 17 line 43-45 where “cut-through” mode of operation in which packet is ended and the data is transmitted before a complete packet is realized, such that portions of a packet may be transmitted while other portions are still being received); and**
- **repeating the steps of starting, receiving the message, interrupting, and transmitting thereby transmitting a plurality of packets (see column 22 line 62 to column 23 line 14).**

Regarding claim 2, Robins et al. teaches further comprising the step of receiving the packets at the message composition module (see column 17 line 11-45 where Queue Manager QM corresponds to message composition module).

Regarding claim 3, Robins et al. teaches the step of receiving the packets is performed in a predefined order (see column 8 line 23-25).

Regarding claim 4, Robins et al. teaches further comprising the step of composing a message with the packets at the message composition module (see column 17 line 25-45).

Regarding claim 5, Robins et al. teaches further comprising the step of formatting the message into a formatted message (**see column 8 line 62 –column 9 line 9**).

Regarding claim 6, Robins et al. teaches further comprising the step of transmitting the formatted message (**see column 10 line 2-7**).

Regarding claim 7, Robins et al. teaches wherein the interrupting step (**see column 17 line 43-45 where “cut-through” mode of operation in which packet is ended and the data is transmitted before a complete packet is realized, such that portions of a packet may be transmitted while other portions are still being received**) is triggered when the message is received from the message composition module (**see column 17 line 25-45**).

Regarding claims 17 and 18, Robins et al. disclose all the limitations as discussed in the rejection of claims 3 and are therefore claims 17 and 18 are rejected using the same rationales.

Claim Rejections - 35 USC § 103

1. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 9, 12, 14, 16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robins et al. (US6430184B1) in view of the background of Chandos et al. (US5615214).

Regarding claims 9, 16, and 19 Robins et al. disclose all the subject matter of the claimed invention with the exception of the total time duration is less than 100ms, the packeting time duration is approximately equal to the total time duration, and a time duration for transmitting the message is negligible compared to the packeting time duration.

The background of Chandos et al. from the same or similar fields of endeavor teaches the system delay to be of tens or hundreds of millisecond in addition to inherent propagation times (**see Chandos et al. column 1 line 25-41**), and propagation path delays vary as relay node evolve (**see Chandos et al. column 1 line 42-44**). In addition, the term "packeting time duration is approximately equal to the total time duration" does not specifically definite the time duration of transmission. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the system delay that is introduced by the background of Chandos et al. in the process and device for communicating data packet flows, including ATM of Robins et al. in order to determine system delay.

Regarding claim 12, Robins et al. teaches a process for transmitting a packet of asynchronous data, comprising the steps of:

- packeting the asynchronous data into a packet during a packeting time
(see column 8 line 16);
- requesting the packet (see column 25 line 45-52);
- stopping the packeting (see column 16 line 17-64 and column 17 line 25-45);
- composing a message comprising the packet (see column 17 line 25-45);
and
- transmitting the message during a message transmitting time (see column 10 line 2-7).

Regarding claim 12, Robins et al. discloses all the subject matter with the exception of packeting time (TP) and transmission time (TMS) $TP > TMS$.

The background of Chandos et al. from the same or similar fields of endeavor teaches the system delay to be of tens or hundreds of millisecond in addition to inherent propagation times (see Chandos et al. column 1 line 25-41), and propagation path delays vary as relay node evolve (see Chandos et al. column 1 line 42-44). In addition, the term "packeting time duration is approximately equal to the total time duration" does not specifically define the time duration of transmission. The propagation delay is not constant and could either be lesser or greater than system

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delay, therefore it meets the limitation that $TP > TMS$. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the system delay that is introduced by the background of Chandos et al. in the process and device for communicating data packet flows, including ATM of Robins et al. in order to determine system delay.

Regarding claim 14, Robins et al. teaches wherein the stopping step (see column 17 line 43-45 where "cut-through" mode of operation in which packet is ended and the data is transmitted before a complete packet is realized, such that portions of a packet may be transmitted while other portions are still being received) is triggered by the requesting step (see column 25 line 45-52).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8, 10-11, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robins et al. (US6430184B1).

Regarding claims 8, 10-11, 13, and 15, Robins et al. discloses all the subject matter with the exception of $TP > TT/2$; $TP = TT$ when $TP >> TMS$; $TP = TBS$. Robins et al. discloses a cut-through mode of operation in which packeting is ended and data transmitted before the complete packet is realized, such that portions of a packet may be transmitted while other portions are still being received. In this mode, the time for

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packetizing (TP) could equals the maximum delay allowable before transmitting of data (TT), or time for packetizing (TP) is more than half of a total time for packetizing the asynchronous data and for transmitting the message, or the time for packetizing (TP) equals bus cycle time (TBC), thereby meeting the limitations of the claim.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robins et al. in view of admitted prior art.

Regarding claim 20, Robins et al. teaches start of packet SOP, middle of packet MOP, end of packet EOP, and start and end of packet SEP (**see Robins et al. figure 6a and column 8 line 15-25**) and disclose all the subject matter of the claimed invention with the exception of a number of data in the packet of asynchronous data equal to or less than 11.

The admitted prior art from the same or similar fields of endeavor teaches the use of a number of data in the packet of asynchronous data equal to or less than 18 (**see Table 1**). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the a number of data in the packet of asynchronous data equal to or less than 18 in the process and device for communicating data packet flows, including ATM of Robins et al. in order to enhance system efficiency.

Response to Arguments

8. Applicant's arguments with respect to claims 12-16 have been considered but are moot in view of the new ground(s) of rejection.

With regard to applicant's remarks for claim 1, Applicant submits that operation 351, a packet is received at an MII [MediaIndependent Interface] and is split at operation 352 into cells by MOM 10 or 20 (emphasis added). A MII (media independent interface), as shown in Figures 1 and 2 of Robins, is not a message composition module but rather is a "MII interface 65 providing eight duplexed Ethernet ports." Thus, as described at column 7, lines 62-66 of Robins, the MII is merely a link that transmits information, it does not construct a message. Thus, the interface is not a "message composition module," as in Applicant's independent Claim 1. In addition, the cited portion of Robins states that "in operation 351, a packet is received. However, a packet is not a message. As described in Applicant's specification at page 2 lines 24-25, a message is made up of successive packets in a predefined order.

Robins does disclose that the RE examines canonicalized packet headers received at interface from the QM and to determine rapidly whether the packet belongs to a known flow and to provide instructions accordingly on interface for appropriate scheduling corresponds to interrupting packeting operation based on the message. Therefore, RE (corresponds to message composition module) provide instruction to QM (corresponds to packeting module) for packeting according to the linked-lists of packet descriptors stored in buffers of the QM.

With regard to applicant's remarks for claim 12, applicant submits the message transmitting time. In fact, the cite portion of Robins does not describe the time of packeting a message vis-a-vis the time of transmitting a message at all. Robins only describes that incomplete packets are sent, there is no indication that the packeting time of packeting incomplete packets is greater than the message transmitting time associated with transmitting portions of packets.

The background of Chandos et al. teaches the system delay to be of tens or hundreds of millisecond in addition to inherent propagation times, and propagrtion path delays vary as relay node evolve. In addition, the term "packeting time duration is approximately equal to the total time duration" does not specifically definite the time duration of transmission. The propagation delay is not constant and could either be lesser or greater than system delay, therefore it meets the limitation that $TP > TMS$.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shirakawa et al. (US7027442)

Oz et al. (US6879634)

Mansouri et al. (US6577640)

Luddwig et al. ((US6948108)

Shirakawa et al. (US6804240)

Clauberg (US6735219)

Yoshio et al. (US7181298)

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Howe (US6611519)

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wutchung Chu whose telephone number is 571 270 1411. The examiner can normally be reached on Monday - Friday 1000 - 1500EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan D. Orgad can be reached on 571 272 7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WC/
Wutchung Chu

EDAN D. ORGAD
SUPERVISORY PATENT EXAMINER

Edan Orgad 9/28/07